

Response Under 37 CFR 1.116

Expedited Procedure

Examining Group 1700

Application No. 09/777,603

Amendment. dated April 27, 2004

In Reply to Office Action dated February 27, 2004

Attorney Docket No. 3576-010027

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims

Claims 1-35 (Cancelled).

Claim 36 (New): In a process for purifying water comprising passing an aqueous system containing impurities through a bed of activated carbon composition, adsorbing the impurities onto the activated carbon composition and producing purified water, the improvement comprising controlling a difference in pH between the aqueous system containing impurities and the purified water to be less than 1 pH unit by using an activated carbon composition consisting essentially of activated carbon and a carboxylic acid containing compound and optionally water.

Claim 37 (New): A process as in claim 36, wherein the carboxylic acid containing compound is present in the activated carbon composition in an amount of from 0.01 to 5 percent by weight based on the dry weight of activated carbon.

Claim 38 (New): A process as in claim 36, wherein the activated carbon is derived from one or more selected from the group consisting of bituminous coal, anthracite, lignite, wood, peat, coconut shells, and synthetic polymers.

Claim 39 (New): A process as in claim 36, wherein the carboxylic acid containing compound is selected from hydroxy carboxylic acids and their corresponding salts.

Claim 40 (New): A process as in claim 36, wherein the hydroxy carboxylic acids and their corresponding salts are one or more selected from the group consisting of citric acid, ascorbic acid, erythorbic acid, glycolic acid, lactic acid, salicylic acid,

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hydroxybutyric acid, hydroxyvaleric acid, and their corresponding ammonium, sodium and potassium salts.

Claim 41 (New): A process as in claim 36, wherein the carboxylic acid containing compound is one or more carboxylic acid containing compounds selected from the group consisting of sequestering agents, buffers, base neutralizers, antioxidants, and reducing agents.

Claim 42 (New): A process as in claim 36, wherein the activated carbon composition is prepared by soaking the activated carbon in a solution containing the carboxylic acid containing compound.

Claim 43 (New): A process as in claim 36, wherein the carboxylic acid containing compound occupies the high energy adsorption sites of the activated carbon.

Claim 44 (New): A process as in claim 36, wherein the activated carbon composition consists essentially of activated carbon and a carboxylic acid containing compound.

Claim 45 (New): A method of controlling the pH of water purified by contact with activated carbon during a start-up phase of a water treatment process comprising the steps of:

- a) providing a bed of an activated carbon composition; and
- b) starting a flow of an aqueous system containing impurities into the bed of activated carbon composition and a flow of purified water out of the bed, wherein a difference in pH between the aqueous system and the purified water is maintained at less than 1 pH unit during a start-up phase by using an activated carbon composition consisting essentially of activated carbon and a carboxylic acid containing compound and optionally water.

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Claim 46 (New): A method as in claim 45, wherein the carboxylic acid containing compound is present in the activated carbon composition in an amount of from 0.01 to 5 percent by weight based on the dry weight of activated carbon.

Claim 47 (New): A method as in claim 45, wherein the activated carbon is derived from one or more selected from the group consisting of bituminous coal, anthracite, lignite, wood, peat, coconut shells, and synthetic polymers.

Claim 48 (New): A method as in claim 45, wherein the carboxylic acid containing compound is selected from hydroxy carboxylic acids and their corresponding salts.

Claim 49 (New): A method as in claim 45, wherein the hydroxy carboxylic acids and their corresponding salts are one or more selected from the group consisting of citric acid, ascorbic acid, erythorbic acid, glycolic acid, lactic acid, salicylic acid, hydroxybutyric acid, hydroxyvaleric acid, and their corresponding ammonium, sodium and potassium salts.

Claim 50 (New): A method as in claim 45, wherein the carboxylic acid containing compound is one or more carboxylic acid containing compounds selected from the group consisting of sequestering agents, buffers, base neutralizers, antioxidants, and reducing agents.

Claim 51 (New): A method as in claim 45, wherein the activated carbon composition is prepared by soaking the activated carbon in a solution containing the carboxylic acid containing compound.

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Claim 52 (New): A method as in claim 45, wherein the carboxylic acid containing compound occupies the high energy adsorption sites of the activated carbon.

Claim 53 (New): A method as in claim 45, wherein the activated carbon composition is dry at start-up of the water treatment process.